AREAS OF HIGH AND LOW PRESSURE.

During the month there were charted nine highs and twelve lows. (See Charts I and II.) A brief description of some of their more marked characteristics follows herewith:

None were of such a character as to merit special description. The majority of the highs originated west of the one hundred and fifth meridian, and six of them reached the Atlantic coast. But one passed south of the thirty-sixth parallel. Twice during the month a high pressure area persisted near the south Atlantic and east Gulf coasts for four or five days, and, in combination with low areas in the Northwest, caused severe hot waves in the Ohio Valley and Middle Atlantic States.

Movements of centers of areas of high and low pressure.

Number.	First observed.			Last observed.			Path.		Average velocities.	
	Date.	Lat. N.	Long. W.	Date.	Lat. N.	Long W.	Length.	Duration.	Daily.	Hourly.
High areas.		°	°		°	°	*Miles.*	*Days.*	*Miles.*	*Miles.*
I	6, a.m.	47	123	11, a.m.	39	75	3,255	5.0	651	27.1
II	10, a.m.	51	114	13, p.m.	33	80	2,320	3.5	663	27.6
III	15, a.m.	53	108	16, a.m.	97	50	565	1.0	565	23.5
IV	16, a.m.	43	109	21, a.m.	45	64	2,680	5.0	536	22.3
V	18, a.m.	47	123	22, p.m.	42	70	2,970	4.5	660	27.5
VI	21, a.m.	51	114	23, p.m.	47	92	1,200	2.5	480	20.0
VII	25, a.m.	50	100	29, a.m.	39	75	2,050	4.0	512	21.3
VIII	28, p.m.	40	105	31, a.m.	37	90	1,300	2.5	520	21.7
IX	30, a.m.	50	108	2, p.m.*	39	75	2,050	3.5	586	24.4
Sums							18,390	31.5	5,173	215.4
Mean of 9 paths							2,043		575	23.9
Mean of 31.5 days									584	24.3
Low areas.										
I	2, p.m.	45	93	5-6, a.m.	48	54	2,000	2.5	800	33.3
II	8, a.m.	54	114	14, p.m.	46	60	3,065	6.5	472	19.7
III	10, p.m.	45	118	13, a.m.	44	98	1,660	2.5	664	27.7
IV	13, a.m.	54	114	16, a.m.	46	78	1,820	3.0	607	25.3
V	15, a.m.	40	109	19, a.m.	46	60	2,860	4.0	715	29.8
VI	16, p.m.	54	114	19, p.m.	46	86	1,720	3.0	573	23.9
VII	19, a.m.	38	100	21, p.m.	48	68	1,925	2.5	770	32.1
VIII	19, p.m.	54	114	22, p.m.	48	85	1,830	3.0	732	31.0
IX	22, p.m. / 23, p.m.	38	100	26, a.m.	47	65	2,080	2.5	832	34.7
X	25, a.m. / 25, p.m.	54	114	30, a.m.	48	68	2,320	4 5	516	21.5
XI	28, p.m.	54	114	31, p.m.	48	68	3,060	3.0	1,020	42.5
XII	31, p.m.	51	114	1-2, p.m.*	44	103	700	1.0	700	29.2
Sums							25,040	38.0	8,401	350.7
Mean of 12 paths							2,087		700	29.2
Mean of 38 days									659	27.5

*August.

The lows, as a rule, originated in the extreme Northwest, west of the one hundred and tenth meridian. They moved generally eastward, and three of them reached the Atlantic coast. Three disappeared in Ontario. Three others, Nos. V, VII, and IX originated in the extreme central west and moved northeastward to the Atlantic Ocean by way of Canada. Two, Nos. III and XII, were dissipated in South Dakota. None moved south of the thirty-seventh parallel, and east of the Mississippi River there were none south of the forty-second parallel.—*H. C. Frankenfield, Forecast Official.*

RIVERS AND FLOODS.

The abnormally low water which prevailed during June in the Mississippi River north of the mouth of the Illinois, was considerably augmented during July by ample falls of rain, and the average stages were about one foot higher than during June. Fair navigable stages prevailed after the first few days of the month, but at its close the water was again falling generally.

The Missouri fell steadily throughout the month, while in the lower Mississippi the stages were extremely favorable for navigation.

Ample stages also prevailed in the Ohio River, with the maximum stages above the mouth of the Tennessee, as a rule, during the closing days of the month.

From Paducah, Ky., to Cairo, Ill., the highest stages were recorded on the 1st and 2d, on account of the moderate flood out of the lower Tennessee River, which was in progress at the end of June, and which continued through the 2d of July. Warnings of this flood were accurate and timely, but unavoidable damage to growing crops, etc., amounting to perhaps $75,000, was caused by high water.

In the rivers of the eastern system nothing worthy of special note transpired, although high stages prevailed in the Black Warrior and lower Tombigbee rivers during the first few days of the month.

The highest and lowest water, mean stage, and monthly range at 128 river stations are given in Table XI. Hydrographs for typical points on seven principal rivers are shown on Chart V. The stations selected for charting are: Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.—*H. C. Frankenfield, Forecast Official.*

CLIMATE AND CROP SERVICE.

By JAMES BERRY, Chief of Climate and Crop Service Division.

The following extracts relating to the general weather conditions in the several States and Territories are taken from the monthly reports of the respective sections of the Climate and Crop Service. The name of the section director is given after each summary.

Rainfall is expressed in inches and temperature in degrees Fahrenheit.

Alabama.—The mean temperature was 79.8°, or 0.2° below normal; the highest was 102°, at Eufaula on the 7th, and the lowest, 56°, at Maple Grove on the 10th. The average precipitation was 4.93, or 0.38 below normal; the greatest monthly amount, 9.69, occurred at Daphne, and the least, 0.45, at Fort Deposit.—*F. P. Chaffee.*

Arizona.—The mean temperature was 84.6°, or 0.7° above normal; the highest was 120°, at Signal on the 11th, and the lowest, 34°, at Flagstaff on the 4th. The average precipitation was 0.65, or 1.31 below normal; the greatest monthly amount, 2.97, occurred at Mount Huachuca, while none fell at a number of stations.—*W. G. Burns.*

Arkansas.—The mean temperature was 79.7°, or 0.7° below normal; the highest was 102°, at Jonesboro on the 3d, and the lowest, 51°, at Witts Springs. The average precipitation was 4.46, or 0.63 above normal; the greatest monthly amount, 8.37, occurred at Wiggs, and least, 1.09, at Osceola.—*E. B. Richards.*

California.—The mean temperature was 75.9°, or 0.4° below norma the highest was 126°, at Salton on the 13th, and the lowest, 30°, at Bodie on the 2d. The average precipitation was 0.03, or 0.02 below normal; the greatest monthly amount, 1.10, occurred at Needles, while none fell at over 100 stations.—*Alexander G. McAdie.*

Colorado.—The mean temperature was 67.7°, or about normal; the highest was 109°, at Delta on the 12th, and the lowest, 25°, at Wagon-wheel Gap on the 2d, 6th, and 17th. The average precipitation was 1.13, or about 1.20 below normal; the greatest monthly amount, 4.57, occurred at Wray, while only a trace fell at a majority of stations located on the upper drainage areas of the Arkansas, Grand, and Gunnison rivers.—*F. H. Brandenburg.*

Florida.—The mean temperature was 81.7°, or 0.3° above normal; the highest was 101°, at Ocala on the 6th and at Gainesville on the 7th and 11th, and the lowest, 62°, at St. Francis on the 16th. The

average precipitation was 7.41, or 0.73 above normal; the greatest monthly amount, 15.36, occurred at Sumner, and the least, 2.17, at Hypoluxo.—*A. J. Mitchell.*

Georgia.—The mean temperature was 80.3°, or 0.5° above normal; the highest was 103°, at Fitzgerald on the 5th, and the lowest, 53°, at Dahlonega on the 10th. The average precipitation was 5.12, or 0.63 below normal; the greatest monthly amount, 14.98, occurred at Quitman, and the least, 1.87, at Carlton.—*J. B. Marbury.*

Idaho.—The mean temperature was 66.6°, or 0.5° below normal; the highest was 115°, at Hagerman on the 30th, and the lowest, 24°, at Marysville on the 19th. The average precipitation was 0.21, or 0.31 below normal; the greatest monthly amount, 1.06, occurred at Kootenai, and the least, trace, at Challis and Murray.—*S. M. Blandford.*

Illinois.—The mean temperature was 75.6°, or 0.5° below normal; the highest was 99°, at Bushnell on the 3d, and the lowest, 41°, at Lanark on the 9th. The average precipitation was 4.23, or 0.63 above normal; the greatest monthly amount, 11.96, occurred at Palestine, and the least, 0.77, at Centralia.—*M. E. Blystone.*

Indiana.—The mean temperature was 75.6°, or 0.7° above normal; the highest was 99°, at Princeton on the 14th, and the lowest, 45°, at South Bend and Winamac on the 12th and at Fairmount on the 13th. The average precipitation was 4.66, or 1.45 above normal; the greatest monthly amount, 8.02, occurred at Angola, and the least, 2.32, at Paoli.—*C. F. R. Wappenhans.*

Iowa.—The mean temperature was 73.4°, or about normal; the highest was 102°, at Logan on the 6th, and the lowest, 37°, at Larchwood on the 22d. The average precipitation was 6.15, or 2.47 above normal; the greatest monthly amount, 18.45, occurred at Primghar, and the least, 1.80, at Mooar.—*J. R. Sage, Director; G. M. Chappel, Assistant.*

Kansas.—The mean temperature was 77.9°, or about normal; the highest was 106°, at Achilles on the 6th and at Scott on the 9th, and the lowest, 43°, at Colby on the 20th. The average precipitation was 3.46, or 0.38 below normal; the greatest monthly amount, 11.19, occurred at Campbell, and the least, 1.05, at Ellinwood.—*T. B. Jennings.*

Kentucky.—The mean temperature was 77.9°, or 0.8° above normal; the highest was 101°, at Maysville on the 15th, and the lowest, 50°, at Vanceburg on the 1st, and at Jackstown on the 13th. The average precipitation was 4.91, or 0.16 above normal; the greatest monthly amount, 12.84, occurred at Williamsburg, and the least, 2.24, at Frankfort.—*H. B. Hersey.*

Louisiana.—The mean temperature was 80.6°, or 1.1° below normal; the highest was 100°, at Libertyhill on the 6th, and the lowest, 60°, at Opelousas on the 11th. The average precipitation was 7.11, or 1.33 above normal; the greatest monthly amount, 18.39, occurred at Venice, and the least, 2.84, at Como.—*W. T. Blythe.*

Maryland and Delaware.—The mean temperature was 77.5°, or 2.3° above normal; the highest was 106°, at Green Spring Furnace, Md., on the 17th, and the lowest, 35°, at Deerpark, Md., on the 1st. The average precipitation was 3.17, or 1.25 below normal; the greatest monthly amount, 6.13, occurred at New Market, Md., and the least, 1.25, at Washington, D. C.—*Oliver L. Fassig.*

Michigan.—The mean temperature was 67.6°, or 1.4° below normal; the highest was 99°, at Mt. Clemens on the 5th, and the lowest, 30°, at Newberry on the 8th, at Roscommon, on the 10th, and at Omer on the 9th and 28th. The average precipitation was 4.81, or 2.13 above normal; the greatest monthly amount, 8.96, occurred at Mackinaw City, and the leaast, 1.60, at Harbor Beach. The average total precipitation is the greatest ever recorded during July.—*C. F. Schneider.*

Minnesota.—The mean temperature was 68.8°, or about 1.0° below normal; the highest was 102°, at St. Cloud on the 30th, and the lowest, 33°, at New Folden on the 25th. The average precipitation was 5.48, or about 2.00 above normal; the greatest monthly amount, 13.19, occurred at Minnesota City, and the least, 1.58, at Ada.—*T. S. Outram.*

Mississippi.—The mean temperature was 80.7°, or nearly normal; the highest was 100°, at Aberdeen on the 8th, and the lowest, 60°, at a number of stations on different dates. The average precipitation was 6.35, or 1.06 above normal; the greatest monthly amount, 16.67, occurred at Magnolia, and the least, 1.99, at Hernando.—*W. S. Belden.*

Missouri.—The mean temperature was 76.9°, or normal; the highest was 102°, at Appleton City on the 3d, and the lowest, 46°, at Zeitonia on the 27th. The average precipitation was 4.10, or 0.31 below normal; the greatest monthly amount, 9.75, occurred at Oregon, and the least, 0.77, at Palmyra. The precipitation was poorly distributed, some sections receiving less than half the usual amount, while in others there was a marked excess. A remarkably heavy rainfall occurred over portions of Holt, Andrew, Nodaway, Gentry, and Worth counties on the 16th, from 3 to 7 inches falling in less than twenty-four hours. At Oregon, Holt County, where the record extends to 1855, the total precipitation for the month, 9.55 inches, is the second greatest July precipitation on record, the greatest being 12.24 inches in July, 1867.—*A. E. Hackett.*

Montana.—The mean temperature was 66.3°, or normal; the highest was 113°, at Glasgow on the 31st, and the lowest, 28°, at Ovando on the 1st and 12th. The average precipitation was 0.62, or 0.73 below normal; the greatest monthly amount, 1.90, occurred at Wibaux, while none fell at Red Lodge.—*E. J. Glass.*

Nebraska.—The mean temperature was 74.4°, or about 0.3° below normal; the highest was 109°, at Beaver City on the 3d, and the lowest, 40°, at Gothenburg on the 16th, and at Gering and Imperial on the 20th. The average precipitation was 4.54, or 1.10 above normal; the greatest monthly amount, 9.90, occurred at Kennedy, and the least, 1.30, at Wellfleet.—*G. A. Loveland.*

Nevada.—The mean temperature was 70.7°, or about 0.5° below normal; the highest was 113°, at Las Vegas on the 10th, and the lowest, 33°, at Duck Valley on the 1st. The average precipitation was 0.37, or about 0.02 below normal; the greatest monthly amount, 2.35, occurred at Palmetto, while none fell at several stations.—*J. H. Smith.*

New England.—The mean temperature was 70.5°, or 1.7° above normal; the highest was 100°, at Providence, R. I., on the 17th, and the lowest, 39°, at Grafton, N. H., on the 3d. The average precipitation was 3.03, or 1.64 below normal; the greatest monthly amount, 6.61, occurred at Derby, Vt., and the least, 1.22, at Hyannis, Mass.—*J. W. Smith.*

New Jersey.—The mean temperature was 75.9°, or 1.9° above normal; the highest was 104°, at Vineland on the 16th, and the lowest, 42°, at Layton on the 2d. The average precipitation was 4.74, or 0.22 below normal; the greatest monthly amount, 7.21, occurred at Hightstown, and the least, 1.11, at Cape May Courthouse.—*E. W. McGann.*

New Mexico.—The mean temperature was 73.4°, or 0.6° above normal; the highest was 105°, at Lyons Ranch on the 10th and at Bluewater on the 14th, and the lowest, 32°, at Winsors on the 5th. The average precipitation was 1.95, or 1.20 below normal; the greatest monthly amount, 7.16, occurred at Shattuck's Ranch, while none was recorded at Aztec, and only a trace at Bluewater.—*R. M. Hardinge.*

New York.—The mean temperature was 70.6°, or 1.6° above normal; the highest was 101°, at Catskill and Primrose on the 17th, and the lowest, 33°, at Bolivar on the 1st. The average precipitation was 4.10, or 0.23 above normal; the greatest monthly amount, 10.22, occurred at Rome, and the least, 1.33, at Catskill.—*R. G. Allen.*

North Carolina.—The mean temperature was 79.2°, or 1.7 above normal; the highest was 107°, at Chapelhill on the 21st, and the lowest, 44°, at Linville on the 9th. The average precipitation was 4.04, or 1.57 below normal; the greatest monthly amount, 9.42, occurred at Horse Cove, and the least, 1.08, at Wilmington.—*C. F. von Herrmann.*

North Dakota.—The mean temperature was 67.9°, or 0.1° below normal: the highest was 107°, at Medora on the 31st, and the lowest, 33°, at Towner on the 19th. The average precipitation was 2.25, or 0.38 below normal; the greatest monthly amount, 4.83, occurred at Berlin, and the least, 0.37, at Coal Harbor.—*B. H. Bronson.*

Ohio.—The mean temperature was 74.1°, or 0.4° above normal; the highest was 103°, at Richwood on the 4th, and the lowest, 38°, at Hillhouse on the 1st. The average precipitation was 4.62, or 0.73 above normal; the greatest monthly amount, 8.17, occurred at Atwater, and the least, 1.32, at Logan.—*J. Warren Smith.*

Oklahoma and Indian Territories.—The mean temperature was 79.3°, or 1.7° below normal; the highest was 104°, at Ryan on the 8th and 10th, and the lowest, 50°, at Wood on the 26th and 27th. The average precipitation was 4.15, or 0.48 above normal; the greatest monthly amount, 9.15, occurred at Fort Reno, and the least, 1.20, at Tulsa.—*C. M. Strong.*

Oregon.—The mean temperature was 66.3°, or about normal; the highest was 106°, at Pendleton on the 30th, and the lowest, 26°, at Silverlake on the 1st. The average precipitation was 0.24, or 0.21 below normal; the greatest monthly amount, 1.71, occurred at Bullrun, while none fell at several stations.—*E. A. Beals.*

Pennsylvania.—The mean temperature was 74.0°, or 2.5° above normal; the highest was 104°, at Quakertown on the 17th, and the lowest, 35°, at Smethport on the 1st. The average precipitation was 4.86, or nearly normal; the greatest monthly amount, 8.26, occurred at Confluence, and the least, 1.81, at Renovo.—*L. M. Dey.*

South Carolina.—The mean temperature was 81.2°, or 1.7° above normal; the highest was 104°, at Batesburg on the 22d, and the lowest, 55°, at Walhalla on the 9th. The average precipitation was 4.08, or 2.29 below normal; the greatest monthly amount, 11.29, occurred at St. Matthews, and the least, 1.05, at Greenwood.—*J. W. Bauer.*

South Dakota.—The mean temperature was 71.4°, or about 1.0° below normal; the highest was 115°, at Forest City on the 31st, and the lowest, 34°, at Rochford on the 8th and 20th. The average precipitation was 5.21, or about 2.45 above normal; the greatest monthly amount, 13.27, occurred at Yankton, and the least, 0.50, at Hot Springs.—*S. W. Glenn.*

Tennessee.—The mean temperature was 78.2°, or 0.8° above normal; the highest was 99°, at Maryville on the 24th, and the lowest, 45°, at Erasmus on the 10th. The average precipitation was 4.14, or 0.51 below normal; the greatest monthly amount, 8.48, occurred at Elk Valley, and the least, 0.93, at Covington.—*H. C. Bate.*

Texas.—The mean temperature, determined by comparison of 48 stations distributed throughout the State, was 1.5° below the normal. Nearly normal conditions prevailed in scattered localities, but as a rule the temperature ranged generally from 1.0° to 3.5° below the normal. The highest was 105°, at Brownwood on the 5th, and the lowest, 55°, at Alpine on the 31st. The average precipitation, determined by comparison of 56 stations distributed throughout the State, was 2.69 above the normal. Nearly normal conditions prevailed over the Panhandle, the eastern and western portions of north Texas, the eastern

portion of central Texas, and the extreme southwestern portion of the State, while over the other portions there was a general excess, ranging from 1.00 to 15.63, with the greatest along the immediate east coast. The rainfall for the month was not very well distributed. The greatest monthly amount, 18.74, occurred at Galveston, and the least, 0.93, at Santa Gertrudes Ranch.—*I. M. Cline.*

Utah.—The mean temperature was 72.6°, or 0.1° above normal; the highest was 111°, at Fillmore on the 30th, at Giles and St. George on the 11th, and Hite on the 11th and 12th; the lowest was 30°, at Henefer on the 4th and 20th. The average precipitation was 0.09, or 0.56 below normal; the greatest monthly amount, 0.95, occurred at Loa; none fell at Millville and 9 additional stations, while 11 stations reported but a trace.—*L. H. Murdoch.*

Virginia.—The mean temperature was 77.8°, or 1.8° above normal; the highest was 105°, at Farmville on the 19th, and the lowest, 41°, at Burkes Garden on the 10th and 14th. The average precipitation was 3.53, or 1.18 below normal; the greatest monthly amount, 6.51, occurred at Norfolk and Sunbeam, and the least, 0.65, at Rockymount.—*E. A. Evans.*

Washington.—The mean temperature was 65.5°, or 1.1° above normal; the highest was 116°, at Lind on the 31st, and the lowest, 34°, at Wilbur on the 5th. The average precipitation was 0 68, or 0.06 above normal; the greatest monthly amount, 2.90, occurred at Clearwater, while none fell at Mottingers Ranch, Waterville, and Wenatchee.—*G. N. Salisbury.*

West Virginia.—The mean temperature was 74.7°, or 1.2° above normal; the highest was 104°, at Martinsburg on the 18th, and the lowest, 41°, at Philippi on the 10th. The average precipitation was 4.38, or 0.35 below normal; the greatest monthly amount, 7.88, occurred at Princeton, and the least, 1.72, at Beckley.—*E. C. Vose.*

Wisconsin.—The mean temperature was 68.6°, or 1.7° below normal; the highest was 100°, at Medford on the 3d, and the lowest, 38°, at the the same station on the 12th. The average precipitation was 7.23, or 3.81 above normal; the greatest monthly amount, 13.35, occurred at Prentice, and the least, 4.20, at Bayfield.—*W. M. Wilson.*

Wyoming.—The mean temperature was 64.9°, or 1.5° below normal; the highest was 116°, at Bittercreek on the 12th, and the lowest, 20°, at Daniel on the 23d. The average precipitation was 1.22, or 0.07 above normal; the greatest monthly amount, 3.69, occurred at Fort Laramie, and the least, 0.06, at Basin.—*W. S. Palmer.*

SPECIAL CONTRIBUTIONS.

RECENT PAPERS BEARING ON METEOROLOGY.

W. F. R. PHILLIPS, in charge of Library, etc.

The subjoined list of titles has been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau:

Symons's Monthly Meteorological Magazine. London. Vol. 35.
Archibald, D. Indian Famine-causing Droughts and their Prevision. (Concluded.) P. 81.
Dines, W. H. Meteorological Extremes. III. Wind Force. P. 85.

Annalen der Physik. Leipzig. 4te Folge. Band 2.
Elster, J. und Geitel, H. Ueber Elektricitätszerstreuung in der Luft. P. 425.
Toepler, M. Ueber die Abhängigkeit des Charakters elektrischer Dauerentladung in atmosphärischer Luft von der dem Entladungsraume continuirlich zugeführten Elektricitätsmenge, nebst einem Anhange zur Kenntnis der Kugelblitz. P. 560.

Archives des Sciences Physiques et Naturelles. Genève. 4 Période. Tome 10.
Richter, E. Les variations périodiques des glaciers. 5me rapport, 1899, rédigé au nom de la Commission internationale des glaciers. P. 26.

Ciel et Terre. Bruxelles.
Ridder, P. J. de. Du retour probable des périodes orageuses. P. 222.
—— Variations du climat aux époques géologiques. P. 226.

Comptes Rendus. Paris. Tome 131.
Marey. Des mouvements de l'air lorsqu'il rencontre des surfaces de différentes formes. P. 160.
Janssen, J. Sur l'Observatoire du Mont Etna. P. 317.

Nature. London. Vol. 62.
Roberts, J. E. Remarkable Hailstorm. P. 341.
Townsend, J. S. Conductivity produced in gases by the motion of negatively charged Ions. P. 340.
Aitken, John. Atmospheric Electricity. P. 366.

Proceedings of the Royal Society. London. Vol. 66.
Dickson, H. N. Circulation of the Surface Waters of the North Atlantic Ocean. P. 484.

Quarterly Journal of the Royal Meteorological Society. London. Vol. 26.
Curtis, R. H. Diurnal Variation of the Barometer in the British Isles. P. 1.
Latham, Baldwin. Climatic Conditions necessary for the propagation and spread of the Plague. P. 37.
Bayard, F. C. New Reduction of the Meteorological Observations at Greenwich. P. 101.
Mawley, E. Report on the Phenological Observations for 1899. P. 113.
Scott, R. H. Results of Percolation Experiments at Rothamsted, September, 1870, to August, 1899. P. 139.

Scottish Geographical Magazine. Edinburg. Vol. 16.
Ormond, R. T. Temperature Observations in Somaliland and Abyssinia. P. 490.
——Temperature of the Free Atmosphere. P. 493.

Das Wetter. Berlin. 17 *Jahrg.*
Assmann, R. Aus dem Aeronautischen Observatorium des kongl. Meteorologischen Institutes. P. 145.

Zeitschrift für Luftschiffahrt und Physik der Atmosphäre. Berlin. 19 *Jahrg.*
Wellner, G. Die Flugmaschinensysteme. (Schluss.) P. 101.
Jacob, E. Die Rolle der Gravitation in der Aviatik. (Schluss.) P. 111.

Meteorologische Zeitschrift. Wien. Band 17.
Meinardus, W. Eine einfache Methode zur Berechnung Klimatologischer Mittelwerthe von Flächen. P. 241.
Fischer, K. T. Ein neues Barometer. P. 257.
—— G. J. Symons. P. 275.
Moller, M. Der räumliche Gradient. P. 275.
Bornstein, R. Eine Beziehung zwischen Luftdruckvertheilung und Monddeklination. P. 276.
Baschin, O. Die ersten Nordlichtphotographien, aufgenommen in Bossekop (Lappland). P. 278.
Dorn. Ueber eine mögliche Wirkung des Hagelschiessens. P. 280.
Hann, J. Der tägliche Gang der Bodentemperatur zu Tiflis. P. 281.
Less, E. Berichtigung. P. 282.
Polis, P. Temperaturumkehr und Föhnwirkung im Hohen Venn. P. 282.
Kremser, V. Klimatische Verhältnisse des Memel-, Pregel- und Weichsel-Gebietes. P. 289.
Ebert, H. and Hoffmann, B. Elektrisirung durch Eisreibung. P. 317.
Bergholz. Beobachtungen während der Sonnenfinsterniss vom 28 Mai, 1900. P. 326.
—— Meteorologische Beobachtungen zu Fort Simpson 1899. P. 326.
Prohaska. Die jährliche und tägliche Periode der Gewitter und Hagelfälle in Steiermark und Kärnten. P. 327.
Prohaska, K. Blitzschäden in Steiermark und Kärnten im Jahre 1899. P. 331.
Hellmann, G. Zur Frage der gestrengen Herrenoder Eismänner. P. 333.
—— Regenfall am Osthang der Peruanischen Anden. P. 335.
Wolfer, A. Provisorische Sonnenflecken-Relativzahlen für das II Quartal 1900. P. 335.
Chabot, J. J. Taudin. Die grüne Strahlung. P. 335.

MEXICAN CLIMATOLOGICAL DATA.

Through the kind cooperation of Señor Manuel E. Pastrana, Director of the Central Meteorologic-Magnetic Observatory, the monthly summaries of Mexican data are now communicated in manuscript, in advance of their publication in the Boletin Mensual. An abstract, translated into English measures, is here given, in continuation of the similar tables published in the MONTHLY WEATHER REVIEW since 1896. The barometric means have not been reduced to standard gravity, but this correction will be given at some future date when the pressures are published on our Chart IV.